

Notice of Allowability

Application No.

09/856,339

Examiner

Yong D. Pak

Applicant(s)

WONG ET AL.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 9-18-2006.
2. ☒ The allowed claim(s) is/are 3,5 and 22-25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

The amendment filed on September 18, 2006, amending claims 3, 5 and 25, has been entered.

Claims 3, 5 and 22-25 are pending and are under consideration.

Response to Arguments

Applicant's amendment and arguments filed on September 18, 2006, have been fully considered and in conjunction with the instant Examiner's Amendment, the rejections previously applied have been withdrawn.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Catena on November 27, 2006.

The application has been amended as follows:

IN THE CLAIMS:

Replace claims 3, 5 and 25 with the following.

--3. (Currently Amended) The process according to claim 25 in which the enzyme is one in which ~~at least~~ amino acid 47 ~~and/or~~ 51 of P450_{BM-3} have has been changed to ~~an~~ another amino acid.--

--5. (Currently Amended) The process according to claim 25 in which the P450_{BM-3} mutant ~~and comprises at least both the mutations R47L and Y51F.~~--

--25. (Currently Amended) A process for oxidizing a substrate wherein said substrate is a limonene or pinene or a cyclic sesquiterpene, wherein said limonene, pinene or cyclic sesquiterpene is optionally substituted by an alkyl of 1 to 6 carbons or an alkenyl of 1 to 6 carbons, and wherein the process comprises: oxidizing said substrate with a mutant haem-containing P450 enzyme, wherein said mutant ~~the enzyme is a mutant of~~ a P450_{BM-3} comprising the amino acid sequence of SEQ ID NO:24 and said mutant enzyme ~~of SEQ ID NO:24 that only has mutations at one or more of the following amino acid positions: 42, 47, 51, 87, 181, 263, 264 and 354 and wherein the~~ said P450_{BM-3} mutant enzyme has a higher oxidation activity towards the substrate which is being oxidized than the ~~an~~ enzyme having the sequence SEQ ID NO:24, and wherein at least one of said mutations is a substitution of an amino acid by another ~~an~~ amino acid ~~with a less polar side chain.~~--

Allowable Subject Matter

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Claims 3, 5 and 22-25 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

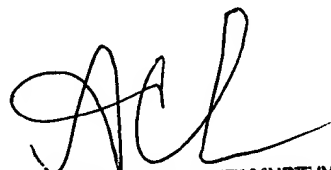
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Pak whose telephone number is 571-272-0935. The examiner can normally be reached 6:30 A.M. to 5:00 P.M. Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Yong D. Pak
Patent Examiner 1652



PONNATHAPU ACHUTAMURTHY
SUPERVISORY PATENT EXAMINER
TECHNOLOGICAL CENTER

Ponnathapu Achutamurthy
Supervisory Patent Examiner 1652